

DIN EN ISO 24234:2011-12 (E)

Dentistry - Mercury and alloys for dental amalgam (ISO 24234:2004 + Amd 1:2011)

Contents		Page
Foreword		vi
Introduction		5
1 Scope		6
2 Normative references		6
3 Terms and definitions		7
4 Requirements		8
4.1 General		8
4.2 Chemical composition of the alloy		8
4.3 Biocompatibility		9
4.4 Foreign material and large particles in the alloy powder		9
4.5 Contamination of the mercury by oil, water and foreign material		9
4.6 Purity of mercury -- Free pouring		9
4.7 Variability of preproportioned masses		9
4.8 Properties of the amalgam		10
4.9 Appearance of the mixed amalgam before setting		10
5 Sampling		11
6 Test methods		11
6.1 Chemical composition of the alloy		11
6.2 Foreign material and large particles in the alloy powder		11
6.3 Contamination of the mercury by oil, water or foreign material		12
6.4 Free-pouring of mercury		13
6.5 Determination of the variability of preproportioned masses		13
6.6 Preparation of test specimens to determine compliance with the requirements for creep, dimensional change and compressive strength		14
6.7 Determination of creep		19
6.8 Determination of dimensional change during hardening		19
6.9 Determination of compressive strength		20
6.10 Appearance of the mixed amalgam before setting		20
7 Marking, labelling and packaging		21
7.1 Packaging		21
7.2 Marking		21
7.3 Manufacturer's instructions		23
Annex A (normative) Determination of immersion corrosion for dental amalgam		25
Annex B (normative) Potentiostatic determination of corrosion for dental amalgam		30
Bibliography		34
Table 1 -- Requirements for chemical composition of the alloy		9
Table 2 -- Properties of amalgam		10
Table 3 -- Schedule for the preparation of test specimens		18
Table B.1 -- Potential settings for different reference electrodes and temperatures of the reference electrodes		33